

## Claims

1. A monitoring device for detecting the amount of signal light propagated in a light transmitting path, and comprising:

said light transmitting paths in which at least end portions are held approximately in parallel and two light transmitting paths are set to one set; and

a prism having two interfaces perpendicular to each other, and returning the incident signal light toward an original incident direction by twice reflecting the signal light at the two interfaces;

wherein the signal light emitted from the end face of one light transmitting path among said one set of optical transmitting paths is incident into said prism; the signal light is returned to the original incident direction by twice reflecting the signal light at the two interfaces of the prism; the signal light is incident to the end face of the other light transmitting path among said one set of light transmitting paths; and the signal light of a predetermined ratio is leaked from at least one of the two interfaces of said prism.

2. The monitoring device according to claim 1, wherein light receiving means for receiving the signal light leaked from said interface is arranged.

3. The monitoring device according to claim 2, wherein said light receiving means is positioned with the leaking-out interface of the signal light in said prism as a reference.

4. The monitoring device according to claim 1, wherein, when it is seen from a direction perpendicular to a plane orthogonal with respect to the mutually orthogonal two interfaces of said prism, a line segment for dividing a narrow angle of said orthogonal two interfaces into two equal parts is inclined from a direction parallel with an optical axis direction of the end portion of said light transmitting path.

5. The monitoring device according to claim 1, wherein a filter for leaking-out one portion of the incident light to the exterior of a light transmitting property medium is formed at least one interface among the two interfaces of said prism.

6. The monitoring device according to claim 1, wherein deflecting means for changing an emitting direction of the signal light leaked from the interface of said prism is arranged.

7. The monitoring device according to claim 1, wherein plural sets of light transmitting paths are arranged with two light transmitting paths as one set, and these light transmitting paths are arranged in a line in

parallel with a plane orthogonal with respect to the mutually orthogonal two interfaces of said prism.

8. The monitoring device according to claim 1, wherein plural sets of light transmitting paths are arranged with two light transmitting paths as one set, and the two light transmitting paths as one set are respectively arranged in parallel with a plane orthogonal with respect to the mutually orthogonal two interfaces of said prism.